

**LEARNING AND APPLYING HEALTH DISPARITY EDUCATION
THROUGH TEXAS TEKS CURRICULUM**

A Senior Scholars Thesis

by

TAYLOR THOMAS MAZAC

Submitted to the Office of Undergraduate Research
Texas A&M University
in partial fulfillment of the requirements for the designation as

UNDERGRADUATE RESEARCH SCHOLAR

April 2010

Major: Health Education

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Approved by:

Research Advisor:

Associate Dean for Undergraduate Research:

Jeffrey J. Guidry

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ABSTRACT

Learning and Applying Health Disparity Education through Texas TEKS Curriculum.
(April 2010)

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As the US population grows in diversity, so has the number of health disparities. Health disparities continue to affect a large portion of the minority population resulting in negative health outcomes. Education remains a key element in the prevention of these adverse health conditions, especially among the ethnically diverse youth. Health education presently fails to be effectively implemented in the activities and instruction in classrooms, which is greatly impacted by the lack of knowledge and training of educators. Through the development and implementation of a new Texas health-science curriculum, educators can acquire the skills and framework necessary to approach a diverse classroom on good health practices. This program will identify the concepts of cultural competency and cultural influences to allow instructors the capacity to adapt a curriculum that suits all students. The analysis and reconstruction of current TEKS curricula is the purpose of this research study. Through studying these sets of data, an increased understanding in health education can be formulated and relayed to grade school level students. Thus, by the increase in health education students of minority can

develop good behavioral norms; reducing the risks associated with rising health disparities.

DEDICATION

To my mom, who has been a large part of my life and always believed and followed me
through every endeavor in life

ACKNOWLEDGMENTS

I give great appreciation to all those whom have assisted in the development of this thesis, especially my fellow co-workers and advisor. Dr. Jeffery Guidry has provided a framework of support and knowledge as the project research advisor. Inspired by this individual, his dedication to health disparity research has assisted in my professional development. I would also like to acknowledge the research committee members for their support. Foremost, I thank my family and friends for their encouragement and belief in me throughout my life. Above all, I thank god for this and all accomplishments and all the people previously mentioned.

NOMENCLATURE

CDC	The Center for Disease and Prevention
NIH	National Institute of Health
SES	Socioeconomic Status
TEKS	Texas Assessment of Knowledge and Skills

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CHAPTER I

INTRODUCTION

The varying degree of individual health continues to be a primary concern among American society. Today, many individuals are living with poor health that affects not only themselves, but also the lives of others. These differences in health are experienced by a large portion of the US population and identified as health disparities. As the National Institute of Health defines, health disparities are the differences in incidence, prevalence, mortality, and burden of disease and other adverse health conditions that exist among specific populations (National Cancer Institute, 2009). A major segment of the US population today is considered minority and the number of racial/ethnic minorities will continue to rise. According to 2007 Census data, 100.7 million of the US population is classified as minority (US Census Bureau, 2007). By year 2050, the United States population projection estimates that minorities will encompass 50% of the total population, a majority-minority society (Williams, 142). With a greater percentage of racial/ethnic minorities, health disparities only will affect the health of more individuals, especially if preventative steps and measures fail to be implemented.

As the incidences of disparities in health rises, a focus on educating individuals the importance of practicing good health is crucial. The element of education remains a powerful tool in health education and promotion. Reaching out to communities of

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predominately ethnic diverse backgrounds and evaluating their needs and behaviors can be an affective approach. The school setting, comprising all levels, is an avenue that shows success in the ability to reach and educate not only the youth, but also society as a whole. Evidence has shown that schools hold a powerful influence on the youth population, establishing behaviorally norms. Thus, of the 48 million youth comprising thousands of schools, effective health education can be reached (U.S. Department of Health and Human Services [HHS], 2009). The Institute of Medicine in 1997 acknowledged, "...students should receive the health-related education and services necessary for them to derive maximum benefit from their education and enable them to become healthy, productive adults." (HHS, 2009). The notion that schools benefit in promoting wellness depends on the educators approach and use. Activities and curriculum integrated with health education can help young people develop skills in practicing good behaviors, which will benefit later in life (HHS, 2009). Increased health education will not only address the future, but also wellness at the current state. Previous studies have shown a direct correlation between academic success and health promotion. Students, particularly those of diverse backgrounds, are continually affected by factors related to their living environment, diet and the physical and emotional status (Centers for Disease Control and Prevention [CDC], 2009).

Applying programs centered on effective health education requires several elements that must be reached at academia and community levels. Providing a beneficial framework for students requires extensive management and coordination throughout a school

system. The Center for Disease and Prevention, Division of Adolescent and School Health, identified four action steps to address health disparities: 1) Focus Programmatic 2) Raise Awareness 3) Build Partnerships and 4) Document Impact. Raising awareness remains an important aspect because it builds knowledge of health disparities and the strategies to effectively address them (CDC, 2009). Educators must focus on this concept to provide instruction to diverse classroom climates. Furthermore, there remains a need for further professional training development through workshops, seminars, and/or post-graduate studies (HHS, 2009). There are many present limitations in academia that affects the success of the learning process and environment. These limitations can be seen throughout all school systems in the United States, one being the Texas Public School System.

Statement of problem

The Texas public school system has been identified as an area of concern in early education. One limitation that remains a strain on Texas schools is the decreasing percentage of qualified science educators. This continual decline in skilled educators places an extensive burden on the health-science education curriculum. Activities introduced and practiced based on the present foundation remains unsuccessful engaging students, especially students of minority. If the percentage of health-science educators continues to decrease, essential learning activities will overlook the importance of health disparities and minority awareness.

The K-5 SCIENCE Center Program, a previous research study, expressed significant data representing the importance of increased science education among an underrepresented school district, Fort Bend Independent School district. In a school district of 95% minority students, eight teachers were trained in inquiry-based science activities. Tested in Spring 2008, the newly formed science based roadmaps proved beneficial in producing and maintaining research interest among minority students.

Purpose and objectives

The purpose of the study was to evaluate the current Texas TEKS curriculum and its effectiveness in disseminating concepts of health education, through the analysis of both the K-5 health and science TEKS. Data was attained through the alignment of both sets of curricula, correlating previous objectives and activities with components of youth health disparities. Through the data attainment, an inclusive curriculum of both health education and science can be designed and implemented into diversified school systems. This program will not only increase a student's knowledge of good health practices, but also promote wellness among society, above all ethnically diverse individuals. The studies hypotheses include:

- 1) The development of an inclusive Texas curriculum, identifying the importance of health education and healthy lifestyle behaviors.
- 2) The TEKS Curriculum will not be found to have a health disparity focus.

CHAPTER II

METHODS

Introduction to methods and procedures

In developing a health education curriculum with the critical component of health disparities several steps must be taken in yielding relevant data. Understanding the youth population and those in the academia community is essential to the overall development and implementation of the study. A needs-based community assessment, teacher-based focus group, and analysis of current health education curricula are significant means throughout the study.

Research instruments

Teacher-based focus group

As a part of tool development, a teacher-based focus group was hosted to acquire data on the current capacity of health education. Assessing the needs of current Texas kindergarten through fifth grade students involves not only the students, but also the educators in the academia community. It is important to analyze their perspective, that from the classroom, to successfully identify where health education needs vital improvement. Additionally, it further allows the study insight into the current approaches and training these individuals possess in reaching the youth community. In hosting this research event the Texas public school system, Bryan Independent School District, was selected for participation. To compile sufficient data, the recruitment of

thirty kindergarten through fifth grade teachers were asked to participate. In accomplishing the diversity component of the study individuals were selected from various schools within the school district.

The first segment of the study gave the teachers an overview of the purpose of the research study. A brief background on current health education and evolving youth health disparities were given to the participants. Through presenting the overview from two different angles the teachers acquired the knowledge to be effective participants. Following the overview a questionnaire section was conducted to analyze the current health education capacity. This consisted of dividing each focus group section by grade level with five teachers and one group facilitator. Each group was inquired on their knowledge and approach to health disparities and asked to write their responses down. Additionally, tape recorders were used to transcribe the data.

K-5 TEKS alignment and analysis

In addition to the focus group, the alignment of the current Texas health-science education curriculum was performed. The K-5 grade TEKS (Texas Essential Knowledge and Skills) was used to assess where health disparities can be included and introduced into the curriculum. Analyzing each grades current science and health program allowed for the two to be aligned collectively. The alignment process involved interpreting where topics of health education could additionally be matched to areas of science. Once the health-science TEKS were aligned accordingly, components of health disparities were linked to appropriate educational activities of the curriculum. This

includes dividing the health disparity components into three subgroups, allowing a greater coverage of the material. Figure 1 below shows the framework for the K-5 health-science curriculum and the steps of approach taken.

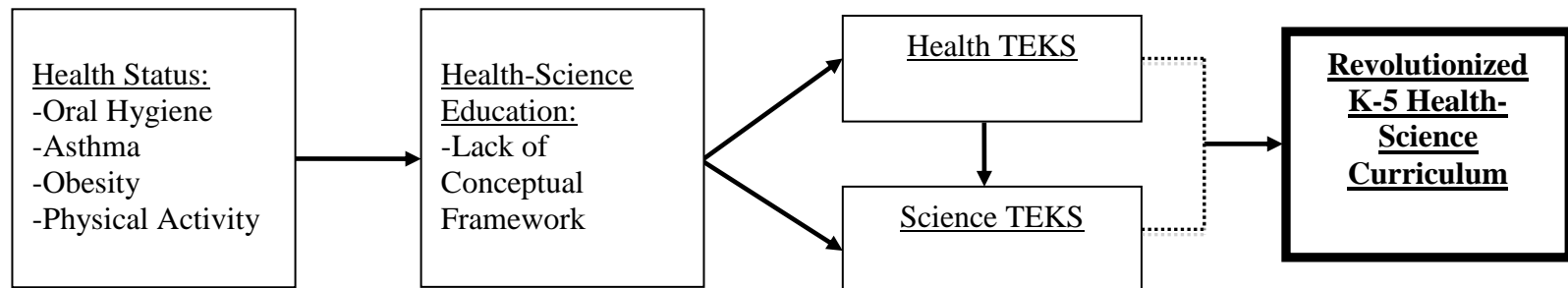


Figure 1.

Framework for Health-Science K-5 Curriculum

CHAPTER III

RESULTS

Data analysis

The process of aligning 2010-2011 Health and Science TEKS were analyzed based on current academic grade levels. All data was recorded using spreadsheets for ease of comparison. Additionally, the data obtained through the teacher-based focus group was transcribed, assisting the TEKS alignment process.

Description of health disparity-TEKS divisions

As planned, both Health and Science TEKS were decoded to outline the significant intercepts regarding each. In analyzing both sets of curricula, predominant health disparity categories were developed. Based on the level of risks and disease associated with young individuals, especially those of minority, three quantifiable levels were recorded. These subgroups were classified as nutritional, environmental, and disease based. As previously stated, oral hygiene, physical activity and obesity, to name a few, are current concerns regarding the health of the youth population. Using this system of grouping the alignment was divided into core components based on grade level. Figure 2 below shows the subgroups and their correlating health disparity factors.

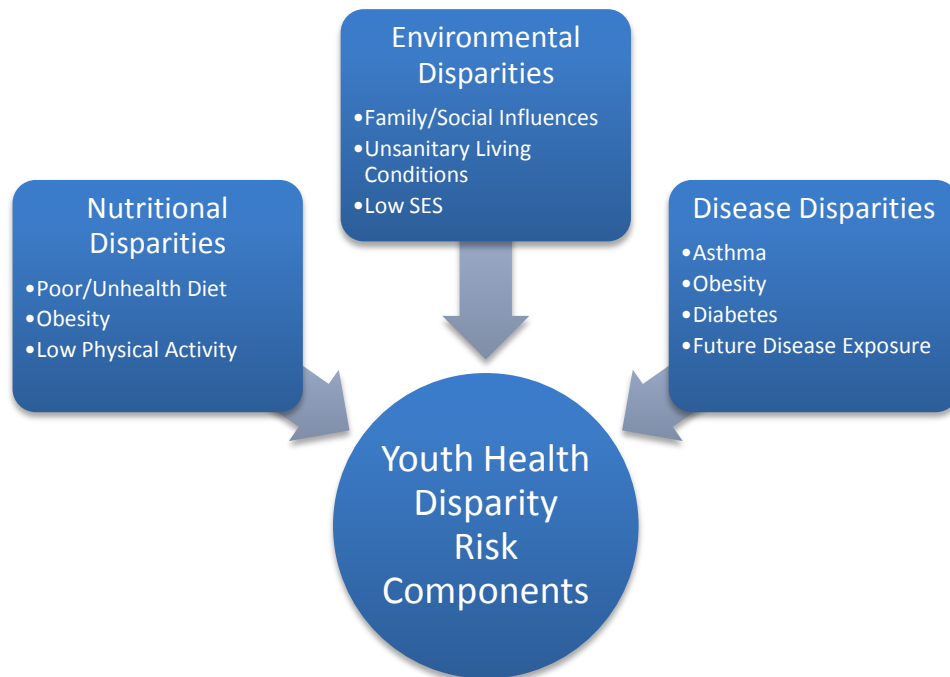


Figure 2. Youth Health Disparity Divisions

Focus group sample and data

In building a greater understanding of health disparity education within public schools the teacher-based focus group depicted relevant data. As the results have indicated, this section of the study presented reliable data on the questions, concerns, and advancements of health education from those in the early education environment. This further assisted in the alignment process of the current health-science TEKS. In the session, consisting of 20 elementary teachers from 2 elementary schools (Bryan ISD), were analyzed based on their current background and educational responses to rising health disparities. To receive critically appropriate responses from each human subject,

a framework outlining current health disparities of schooled youth was used to ignite the objective. Once presented with knowledgeable data, five groups comprising of four teachers were probed in their interpretation of health disparity related concepts.

Questions pertaining to the three divisions of health disparities (nutrition, environment, disease) were asked among each group. Common feedback and questions recorded from the focus group: (1) how to introduce a controversial topic while staying within allowed boundaries, (2) will it make the racial/ethnic diverse students feel “exposed”, (3) to what extent should a given health disparity be discussed, and (4) will a school-home conflict arise based on what knowledge the students acquired. These responses were gathered and later applied in placing health disparity components into the educational scheme.

TEKS-health disparity sample and results

Through the initial health-science alignment process, data was gathered representing all intersecting segments of current TEKS. In accurately connecting all nexuses surrounding health education, concepts of health disparities were paralleled to the previously aligned TEKS. Data collected from the teacher-based focus group was used in the correlating process. Analyzed information from participating respondents was used in deciphering where and to what extent disparities could be introduced in early education. The three subgroups (nutrition, environment, disease) were placed in accordance to the previously aligned health-science TEKS. Based on these subgroups, youth health risks and behaviors were placed within the program outline. This allowed for all learning activities to be used on a health and science level and provide guidelines

for instructors. Such activities dealt with: youth asthma awareness; community and school environmental risks; disease prevention and care; and factors of obesity and diet. These ideas were related structurally to a child's knowledge capacity with their current academic age level. Also, another area of concern that remains is oral hygiene at the youth level. The program further evaluated the factors related to this concern and linked nutrition-diet to oral hygiene. Table 2 below shows the aligned health-science TEKS with health disparity components.

Table 1. Aligned Health-Science TEKS with Health Disparity Components

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
<u>Level:</u> <u>Kindergarten</u>	2.A ask questions about organisms, objects, and events observed in the natural world 9.A differentiate between living and nonliving things based upon whether they have basic needs and produce offspring; and 9.B examine evidence that living organisms have basic needs such as food, water, and shelter for animals and air, water, nutrients, sunlight, and space for plants.	K.1C Identify types of exercise and active play that are good for the body	<u>Disease</u> <ul style="list-style-type: none"> ▪ Exercise today-reduce the risk of detrimental disease/illness in the future ▪ Factors of obesity
	1.A identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing	K.2B Identify safe and unsafe places to play such as a back yard and a street	<u>Environmental</u> <ul style="list-style-type: none"> ▪ Environmental risks (traffic, smoke, pollution, urban) can effect one's overall health

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	<p>hands, and using materials appropriately;</p> <p>1.B discuss the importance of safe practices to keep self and others safe and healthy;</p> <p>2.A ask questions about organisms, objects, and events observed in the natural world</p> <p>3.A identify and explain a problem such as the impact of littering on the playground and propose a solution in his/her own words;</p> <p>5.A observe and record properties of objects, including relative size and mass, such as bigger or smaller and heavier or lighter, shape, color, and texture</p>		
	2.A ask questions about organisms, objects, and	K.3B Plan a healthy meal and/or snack	<p><u>Nutritional</u></p> <ul style="list-style-type: none"> ▪ Importance of healthy diet in relation to

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	<p>events observed in the natural world</p> <p>9.A differentiate between living and nonliving things based upon whether they have basic needs and produce offspring; and 9.B examine evidence that living organisms have basic needs such as food, water, and shelter for animals and air, water, nutrients, sunlight, and space for plants.</p> <p>5.A observe and record properties of objects, including relative size and mass, such as bigger or smaller and heavier or lighter, shape, color, and texture</p>		<p>diabetes, obesity, CVD and asthma</p> <ul style="list-style-type: none"> ▪ Outline what makes a meal/snack healthy – benefits to health
<u>Level: First</u>	1.B recognize the importance of safe practices to keep self and others safe and	1.5B List ways health information can be used such as knowing how to brush teeth	<p><u>Disease</u></p> <ul style="list-style-type: none"> ▪ Oral hygiene – Gum Disease – Cavities ▪ Later life implications

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	<p>healthy; and</p> <p>2.A ask questions about organisms, objects, and events observed in the natural world;</p> <p>3.A identify and explain a problem such as finding a home for a classroom pet and propose a solution in his/her own words</p> <p>3.B make predictions based on observable patterns</p>	properly	
	<p>2.A ask questions about organisms, objects, and events observed in the natural world;</p> <p>8.A record weather information, including relative temperature, such as hot or cold, clear or cloudy, calm or windy, and rainy or icy;</p> <p>8.B observe and record changes in the appearance of objects in the sky</p>	1.8B Describe ways in which a person's health may be affected by weather and pollution	<p><u>Environment</u></p> <ul style="list-style-type: none"> ▪ Environmental risks (traffic, smoke, pollution, urban) can effect one's overall health ▪ Carcinogens (minimal) – smoke, gases

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	<p>such as clouds, the Moon, and stars, including the Sun;</p> <p>8.C identify characteristics of the seasons of the year and day and night; and</p> <p>8.D demonstrate that air is all around us and observe that wind is moving air.</p> <p>9.B analyze and record examples of interdependence found in various situations such as terrariums and aquariums or pet and caregiver; and</p> <p>9.C gather evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter.</p> <p>10.A investigate how the external characteristics of an animal are related to where it lives, how it</p>		

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	moves, and what it eats;		
	<p>1.A recognize and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately</p> <p>1.B recognize the importance of safe practices to keep self and others safe and healthy</p> <p>2.A ask questions about organisms, objects, and events observed in the natural world;</p> <p>9.A sort and classify living and nonliving things based upon whether or not they have basic needs and produce offspring;</p> <p>9.C gather</p>	<p>1.1A Describe and practice activities that enhance individual health such as sleep, nutrition, and exercise</p>	<p><u>Nutritional</u></p> <ul style="list-style-type: none"> ▪ Nutrition/Sleep - Effects in school performance and mental abilities ▪ Diseases pertaining to obesity - CVD, diabetes and asthma ▪ Cause/effect pattern

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	evidence of interdependence among living organisms such as energy transfer through food chains and animals using plants for shelter.		
<u>Level:</u> <u>Second</u>	2.A ask questions about organisms, objects, and events during observations and investigations 3.A identify and explain a problem in his/her own words and propose a task and solution for the problem such as lack of water in a habitat; 3.B make predictions based on observable patterns; and 3.C identify what a scientist is and explore what different scientists do. 4.A collect, record, and compare information using tools, including	2.1A Explain actions an individual can take when not feeling well	<u>Disease</u> <ul style="list-style-type: none"> ▪ Preventative/Primary Care ▪ Implications of secondary and tertiary treatment ▪ Reducing spreading of disease (school & home) ▪ Later life – health risks

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	<p>computers, hand lenses, rulers, primary balances, plastic beakers, magnets, collecting nets, notebooks, and safety goggles; timing devices, including clocks and stopwatches; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums; and</p> <p>4.B measure and compare organisms and objects using non-standard units that approximate metric units.</p> <p>9.A identify the basic needs of plants and animals;</p> <p>9.B identify factors in the environment, including temperature and</p>		

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things		
	<p>2.E communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.F compare results of investigations with what students and scientists know about the world.</p> <p>3.A identify and explain a problem in his/her own words and propose a task and solution for the problem such as lack of water in a habitat;</p> <p>3.B make predictions based on observable patterns; and</p> <p>3.C identify what a scientist is and explore what different</p>	<p>2.11B Describe how personal-health decisions affect self and others</p>	<p><u>Environment</u></p> <ul style="list-style-type: none"> ▪ Health of one individual in relation to another peer – disease transmission ▪ Body hygiene ▪ Preventative/Primary Care

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	scientists do.		
	<p>1.B describe the importance of safe practices; and</p> <p>2.A ask questions about organisms, objects, and events during observations and investigations</p> <p>3.A identify and explain a problem in his/her own words and propose a task and solution for the problem such as lack of water in a habitat;</p> <p>3.B make predictions based on observable patterns; and</p> <p>3.C identify what a scientist is and explore what different scientists do.</p> <p>9.A identify the basic needs of plants and animals;</p> <p>9.B identify factors in the environment, including temperature and precipitation, that</p>	<p>2.1D Identify healthy and unhealthy food choices such as a healthy breakfast and snacks and fast food choices</p>	<p><u>Nutritional</u></p> <ul style="list-style-type: none"> ▪ Importance of healthy diet in relation to diabetes, obesity, CVD and asthma ▪ Outline what makes a meal/snack healthy – benefits to health ▪ Cause/effect pattern ▪ Awareness/productivity in classroom ▪ Oral hygiene relationships

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	affect growth and behavior such as migration, hibernation, and dormancy of living things; and 9.C compare and give examples of the ways living organisms depend on each other and on their environments such as food chains within a garden, park, beach, lake, and wooded area.		
<u>Level: Three</u>	3.A Explore how structures and functions of plants and animals allow them to survive in a particular environment	3.3A Identify health behaviors that prevent the spread of disease and avoid behaviors that cause the transmission of disease	<u>Disease</u> <ul style="list-style-type: none"> Health of one individual in relation to another peer – disease transmission Preventative/Primary Care Activity – washing hands
	1.B Make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics 2.D Analyze and	3.6A Relate how protecting the environment promotes individual and community health	<u>Environment</u> <ul style="list-style-type: none"> Reducing environmental toxins – factors and effects Cause/effect pattern

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	<p>interpret patterns in data to construct reasonable explanations based on evidence from investigations</p> <p>3.C Represent the natural world using models such as volcanoes or Sun, Earth, and Moon system and identify their limitations, including size, properties, and materials</p> <p>9.A Observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem</p>		
	<p>2.C Construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate</p>	<p>3.1D Describe food combinations in a balanced diet such as a food pyramid</p>	<p><u>Nutritional</u></p> <ul style="list-style-type: none"> ▪ Importance of healthy diet in relation to diabetes, obesity, CVD and asthma ▪ Outline what makes a meal/snack healthy – benefits to health ▪ Cause/effect pattern

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	measured data 2.D Analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations		
<u>Level: Four</u>	3.A Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information 3.D Evaluate the impact of research on scientific thought, society, and the environment	4.4C Describe the short-term and long-term harmful effects of tobacco, alcohol, and other substances such as physical, mental, social, and legal consequences	<u>Disease</u> <ul style="list-style-type: none"> Community/urban effects Lung cancer/disease – leading cause of death Liver – function and disease
	8.A Identify characteristics that allow members within a species to survive and reproduce	4.1E Explain how sleep affects academic performance	<u>Environment</u> <ul style="list-style-type: none"> Nutrition/Sleep - Effects in school performance and mental abilities
	2.B Collect information by observing and measuring 3.B Draw	4.1B Identify information on menus and food labels	<u>Nutritional</u> <ul style="list-style-type: none"> Importance of healthy diet in relation to diabetes, obesity, CVD

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	inferences based on information related to promotional materials for products and services		and asthma <ul style="list-style-type: none"> ▪ Outline what makes a meal/snack healthy – benefits to health ▪ Cause/effect pattern
<u>Level: Five</u>	2.D Analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence 2.G Construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information 9.A Observe the way organisms live and survive in their ecosystem by interacting with the living and non-living elements 9.C Predict the effects of changes	5.4D List the effects of harmful viruses on the body such as polio, Human Immunodeficiency Virus (HIV), and the common cold	<u>Disease</u> <ul style="list-style-type: none"> ▪ Preventative/Primary Care ▪ Health of one individual in relation to another peer – disease transmission ▪ Implications of secondary and tertiary treatment ▪ Reducing spreading of disease (school & home) ▪ Later life – health risks

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways		
	2.D Analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence 2.F Communicate valid conclusions in both written and verbal forms 3.B Evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels	5.7A Research the effect of media on health-promoting behaviors	<u>Environment</u> <ul style="list-style-type: none"> ▪ Nutritional factors – obesity, CVD and diabetes ▪ Cause/effect patterns – defining implications ▪ Identifying eco-friendly
	2.D Analyze and interpret information to construct reasonable explanations from direct	5.1C Identify foods that are sources of one or more of the six major nutrients	<u>Nutritional</u> <ul style="list-style-type: none"> ▪ Importance of healthy diet in relation to diabetes, obesity, CVD and asthma ▪ Outline what makes a

Table 1. Continued

	<u>Science TEKS</u>	<u>Health TEKS</u>	<u>Health Disparity Component</u>
	(observable) and indirect (inferred) evidence 2.G Construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information		meal/snack healthy – benefits to health – Balancing diet <ul style="list-style-type: none"> ▪ Cause/effect pattern ▪ Diabetes among African Americans and other ethnicities

CHAPTER IV

SUMMARY AND CONCLUSIONS

Review of purpose and literature

The purpose of this study was to evaluate the current Texas TEKS curriculum, a public school education system and the design of its core subject topics. Focusing on health education and the need for increased knowledge and skills in healthy behaviors among today's youth is the core foundation for this investigation. This is especially evident through the increased minority student population among Texas schools. Thus, health disparities affecting the youth will only rise. To benefit the health patterns for future generations it remains crucial that education systems outline the importance of health lifestyles.

A review of the current health and science TEKS curriculum showed an inadequate framework for health education. However, variations were found that correlated wellness components with instruction activities. The K-5 health and science TEKS program was analyzed to restructure for the health of society.

Summary

In summary, the aligned K-5 health and science TEKS showed substantial significance when correlated to elements of health education. While the current enacted system only discusses health with minimal relevance, this system is more adaptive to the changing

educational structure. Elements were taken and paralleled based on the similarities of both sets of curricula. As a result, this new foundation will allow students to identify and relate to community factors regarding health status. Analysis of the newly aligned health-science TEKS allowed for components of health disparities to be adopted within the program. Through taking the present implemented learning activities, the program was studied for future concepts regarding health disparities. Based on the main determinants of youth health behaviors and risks, the program was created with a foundation of three core areas. Comprising of three categories, the detrimental health risks associated with young individuals was linked to areas of TEKS curriculum.

Conclusion

The intention of this study was to design a system that fundamentally addresses scientific elements and understanding with immersed aspects of health. As the TEKS curriculum continues to evolve, areas in the study of teacher-faculty training and other relevant programs of comparison will need to be investigated. Online teacher health disparity training modules is one program that can benefit the health of students, especially in reducing the number of health disparities.

As the findings of the study indicated, it is important that school education systems be reevaluated. It is crucial that components of health disparities affecting our youth population be an important aspect of education. If students fail to learn the risks and benefits of health, our society will only continue to be predisposed to poor health

outcomes. If areas regarding disease awareness and prevention are more globally accepted by individuals, people would be impacted in positive terms. Health educators must take the initiative to implement and continue to advise programs on health disparities. So, why not start with our nation's youth?

The youth is and will remain the framework for society. Educators, particularly health educators, need to identify with these components found throughout this study and program. If a school system adopts these concepts others will follow, which will ultimately restructure the healthy lifestyles of children.

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